

WITNESS TO HISTORY

TAKING STOCK OF SILENT SENTINELS TO STORIED LANDSCAPES

There is a large sycamore growing by a creek at Antietam National Battlefield, a giant of a tree that appears so old and venerable that visitors might think it was a veteran of the actual fight in September 1862. And in fact, it was, standing just a few feet tall, while the bloodiest day of the Civil War unfolded around it. Mere feet away is Burnside Bridge, the focus of much of the fighting, where 400 Confederate soldiers managed to hold the line for several hours against 12,000 federals. Repeated Union charges were beaten back and the dead fell in piles near the tree. Horses, heavy equipment, and thousands of soldiers swarmed around it and the storm of artillery and rifle fire went on for hours.

Another peculiarity is that it cannot reproduce with its seeds. It can be propagated with cuttings, however, which are being used to grow disease-resistant trees to replace those that have died. “This is literally the mother of all elm trees in America,” says project director Paul Dolinsky. “This is *the* tree.”

THE WITNESS TREE PROTECTION PROGRAM IS A FIRST-OF-ITS-KIND EFFORT TO RECORD TREES THAT ARE “BIOLOGICALLY AND HISTORICALLY SIGNIFICANT.” TWENTY-FOUR TREES WERE CHOSEN; ALL HAVE EITHER WITNESSED A MAJOR EVENT OR POSSESS A REMARKABLE BIOLOGICAL CHARACTERISTIC SUCH AS ADVANCED AGE, EXCEPTIONAL SIZE, OR RESISTANCE TO DISEASE.

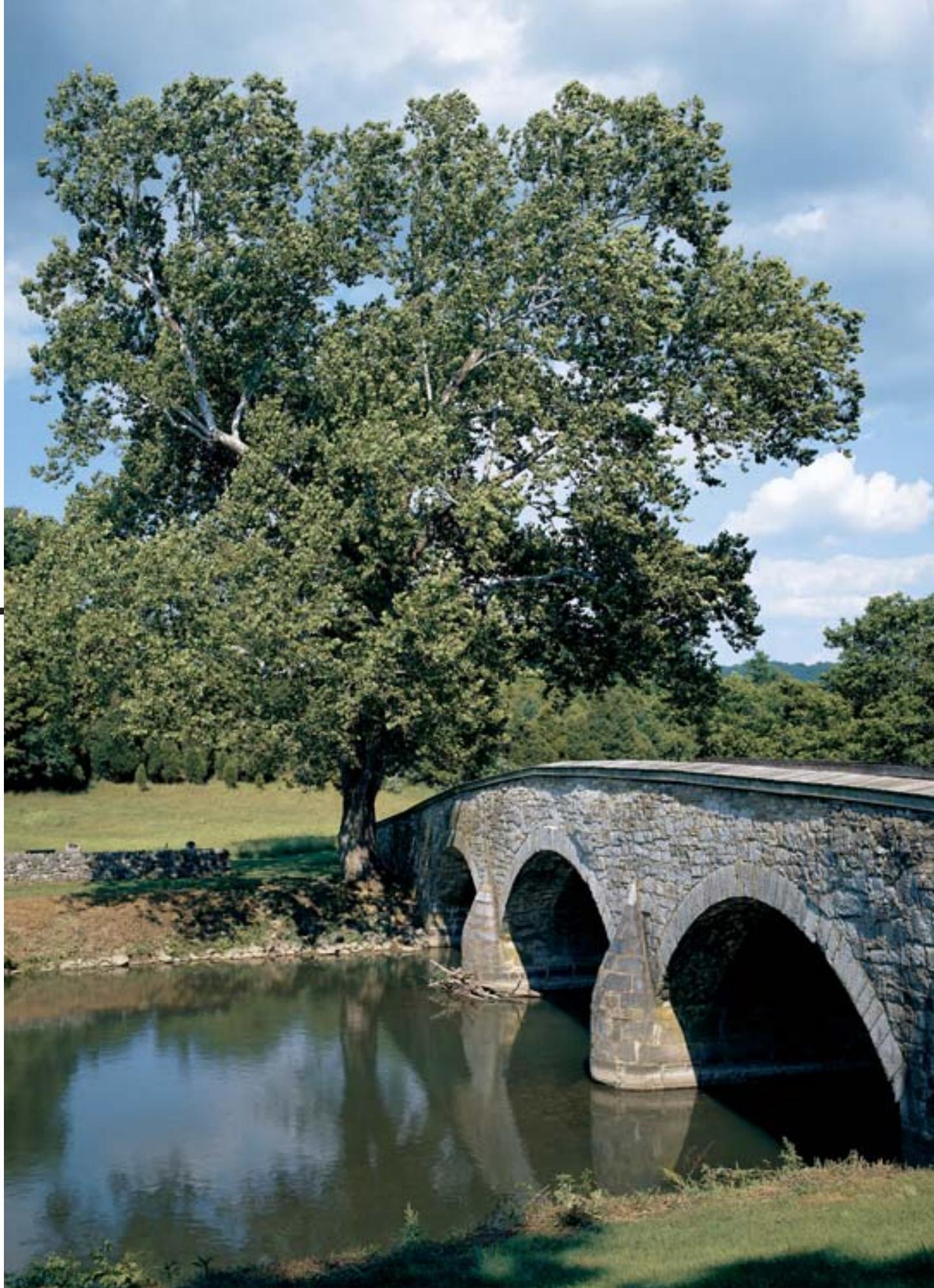
Right: The sycamore at Burnside Bridge, witness to the bloody battle of Antietam.

The battle of Antietam produced a shocking 23,000 casualties. Photographs the following day show the sapling—still standing somehow—amid the wrecked landscape. This summer, members of the Historic American Landscapes Survey of the National Park Service photographed and recorded what is now known as the Burnside Bridge American Sycamore, part of a pilot project initially focused on the Washington, DC region. The Witness Tree Protection Program is a first-of-its-kind effort to record trees that are “biologically and historically significant.” Twenty-four trees were chosen; all have either witnessed a major event or possess a remarkable biological characteristic such as advanced age, exceptional size, or resistance to disease. Other projects have singled out trees for either historical or biological reasons, but never for both. The Burnside Bridge sycamore, for example, is 100 feet tall, its trunk over 16 feet in circumference—the absolute limit for this species and one not reached very often.

A pair of southern magnolias, near the rear portico of the White House, were also documented, both planted by Andrew Jackson as a memorial to his wife. Magnolias were her favorites, and the president brought the saplings from his home in Tennessee to remember her. Today, they are among the oldest trees on the grounds, stout and stable, such a presence that they are depicted on the back of the old \$20 bill. The Hermitage, Jackson’s Tennessee home, was hit by a tornado in 1994, which destroyed many of the old magnolias on the property. In a homecoming of sorts, cuttings from the White House specimens were brought back to the Hermitage to replace the ones that were lost.

The project, done in cooperation with the National Capital Region of the Park Service, provided large format photography, written histories, and a GIS database for these living landmarks. The images will also become part of the photographic collection at the Library of Congress. The information will provide a scientific basis for monitoring and maintenance and help share the story with the public.

When Pierre L’Enfant designed the nation’s capital in 1791, he imagined a processional avenue similar to the Champs Elysées in Paris. But by 1901, much of his vision had gone unrealized. Congress decided that, given the nation’s rising international prominence, the capital should look the part, so it revisited some of L’Enfant’s ideas. They ordered a redesign of the Mall, a decades-long process to create a large, monumental public garden. During the Depression, 600 American elms were planted along the Mall. By 1994, Dutch elm disease, which devastated the species nationwide, had claimed a third of them. An NPS natural resources specialist noticed that some of the elms developed leaves earlier and kept them later. Researchers focused on one tree—called the Jefferson Elm—to see if they could discover why. Tests revealed that the specimen is genetically different from other American elms, and while the connection is unclear, it is also resistant to the disease.



JAMES ROSENTHAL/SPHALS



The tree now called the Lady Bird Johnson Park Eastern Cottonwood took root naturally in a Potomac River sandbar sometime around 1915. Today it towers over the water, defying both life expectancy and normal proportions for its species. Cottonwoods like moist, well-drained, sandy soil, which was abundant on the banks of the Potomac when the tree germinated. But decades of construction, roadwork, and memorial-building reshaped the landscape, changing the soil conditions. The tree adapted somehow, and

picnickers and sightseers find shade beneath its branches while its stature adds to the bucolic appearance the city sometimes takes on when viewed from the river. It is at least 90 years old, likely surpassing by a decade the cottonwood's usual life span.

Further down the George Washington Parkway along the Potomac is another member of the Witness Tree Protection Program. The Methuselah Willow Oak, whose precise age is unknown, was already a big tree during the Depression when the



parkway was built. It stands out in aerial photos from the period, commanding respect even then. Engineers designed a curve in the parkway's course to integrate the tree.

The willow oak grows about one to two feet per year, so this specimen may have sprouted sometime around the turn of the century. Though close to the roadway, it is robust, exceeding the typical height of 60 feet with an average trunk circumference of 12 feet. The branches span approximately 140 feet. Willow oaks can live to be 150 years old, so this one should be standing by the road for some time to come.

ONE OF THE LARGEST TREES IN WASHINGTON—JOINING A 105-FOOT-TALL WHITE OAK ON NORTHAMPTON Street and a 96-foot tulip poplar in Georgetown—is a massive 200-year-old white oak measuring 100 feet high and almost 150 inches around its trunk. While size and age would likely have won it a place in the program, it is in what was once the yard of abolitionist Frederick Douglass.

When Douglass lived at Cedar Hill, from 1877 to 1896, the tree was already an imposing presence, so much so that he included descriptions in his diaries. While it may seem ancient, the oak could well be in its prime. When it was examined last summer, it was healthy and disease free. A member of a slow-growing and long-lived species, this specimen could be around for another two centuries.

Casey Trees—a Washington, DC, advocacy group whose Living Legacy Campaign had measured the city's biggest specimens—worked with the National Park Service on the project. One of the Witness Tree Program's most important aspects is its bridge between the natural and the cultural, sometimes together in one tree. Look, for example, at the cedar that Jon Pliska of HALS calls "a grand biological specimen" in Arlington National Cemetery, just outside the house that belonged to Robert E. Lee.

When the South seceded from the Union, the federal government confiscated the residence and the property around it, which became a cemetery after the war. The tree was planted in 1874, to make the surroundings more soothing for grieving visitors. To some, it might seem out of place at Arlington House, as the site that preserves where General Lee lived before the conflict. The park has determined, however, that part of the significance is the tie to the cemetery, and that the evolution of the estate is part of the story, too.

The program's organizers hope the results will serve as an example to other parks, illustrating how signature trees can be preserved and interpreted to the public, giving their own testimony on culture's implicit ties with nature.

For more information, contact Paul Dolinsky, Chief, Historic American Landscapes Survey, paul_dolinsky@nps.gov.

Above: Giant tulip poplar at historic Tudor Place in Georgetown. Near right: Ornamental pear tree—planted in 1932 as part of the nation's capital beautification plan—in what is now Lady Bird Johnson Memorial Park. Far right: Crab apple near Memorial Bridge, also planted as part of the beautification project.



HARVEST IN THE BARRENS

PROJECT DOCUMENTS EARLY ENGINEERING OF NEW JERSEY'S WILD PLACES

By name, the New Jersey Pine Barrens connote nothing so much as wilderness and solitude. The vast stretches of forest and wetlands making up much of the state's south are popular among hikers and nature lovers, a sometimes forbidding, moor-like landscape irresistible to the makers of local legend. In a series of old buildings and manmade imprints on the land, the Pine Barrens conceal a little-known story, a window on a long-ago era that testifies not only to life at the time, but to the larger issues of immigration, labor, and the evolution of agricultural technology in the late 19th and early 20th centuries.



WILD CRANBERRIES GREW NATURALLY IN THE PINE BARRENS, BUT EARLY CULTIVATORS FOUND HOW FINICKY THE PLANT COULD BE. SUCCESSFUL HARVEST REQUIRED MANIPULATING NATURE, WHICH LEFT ITS MARK IN MANY WAYS. CREATING OPTIMAL CONDITIONS FOR THE PLANT—AND GETTING A FRESH PRODUCT TO MARKET IN PHILADELPHIA AND NEW YORK—DEMANDED TECHNOLOGICAL INTERVENTION.

WHITESBOG IS A LONGTIME CRANBERRY-GROWING ENTERPRISE WITH ORIGINS IN the mid-1800s. It became so big that a company town grew up amidst the bogs. The high water table and sandy, acidic soil were ideal for the low-growing plant. A lucrative market fueled the growth of a family business so that the site eventually sprouted a general store, worker housing, warehouses, and packing plants. Many of the structures still stand.

The National Park Service documented Whitesbog as part of its Historic American Landscapes Survey. It is unique as a vernacular landscape, a manifestation of how nature and science were merging at the time, a microcosm of what was happening on a national scale.

Wild cranberries grew naturally in the Pine Barrens, but early cultivators found how finicky the plant could be. Successful harvest required manipulating nature, which left its mark in many ways. Creating optimal conditions for the plant—and getting a fresh product to market in Philadelphia and New York—demanded technological intervention.

The project captures what the report calls “a heavily engineered landscape.” Still, Whitesbog shows a light touch not common to other forms of agriculture. “It’s very subtle,” says Lisa Davidson, an

historian who worked on the project. “If you didn’t know any better, you’d think it was a natural landscape.”

BY THE 1860S, CRANBERRIES WERE COMMANDING A HIGH PRICE, AND THE developing rail system could reach urban markets. By the end of the decade, New Jersey was the leading producer.

J.J. White and his wife Mary wrote *Cranberry Culture*, a manual that became the industry standard. The optimum conditions, the Whites discovered, were “an equal mixture of coarse sand and muck.” This seldom occurred naturally so the ground had to be massaged. Water was key, too. According to *Cranberry Culture*: “The cranberry requires moisture always near the surface of the soil, but it is necessary that it circulate freely through the ground, as stagnant water is fatal.” Surmounting these obstacles left a remarkable imprint on the land.

The growth cycle required flooding the plants for long periods of time. This protected against frost and pests. The organic matter in the water served as fertilizer. A system of dams and floodgates regulated the flow, with bogs dug at an incline to facilitate the process.

Above left: The fruit of the labor, the harvest at Whitesbog. Above center: Elizabeth White. Right: Her house.

LEFT WHITESBOG PRESERVATION TRUST, RIGHT JOSEPH ELLIOTT/ANP/SHALS





LEFT AND NEAR RIGHT JOSEPH ELLIOTT/INSHALS, MIDDLE AND FAR RIGHT WHITESBOG PRESERVATION TRUST

Left: Cranberry packing and storage building. Below: Life and work at the bogs.

EFFECTING THIS SYSTEM ON A LARGE SCALE REQUIRED EXTENSIVE SHAPING of the terrain. Timing was critical. The bogs were flooded after the harvest. If the water was released too early the next spring, a cold spell could damage the crop. If released too late, the water would retard growth and compromise the season.

The small settlement in the pines, arranged at a dirt crossroads, was “the functional and visual center of the Whitesbog landscape,” says the report. Its extensiveness and self-sufficiency were remarkable for the time. There was a year-round work force of over 40 people.

Most New Jersey farms were small, family-run enterprises. During harvest time, the need for labor was acute. Whitesbog was no exception. A flood of immigrants, arriving from southern Italy, gravitated to industrial jobs in places like Philadelphia and New

A years-long experiment with the U.S. Department of Agriculture used Whitesbog as a testing ground. After a long period of trial and error, the result was a hugely successful crop—and the beginning of the domesticated blueberry.

In 1922, Elizabeth built a house at Whitesbog in the arts and crafts style, called Suningive, set on the edge of the bogs. Its grounds and greenhouses served as a lab for experiments in domesticating a host of native plants and trees, primarily hollies. Today, Suningive houses a local office of the Nature Conservancy.

NEW TECHNIQUES IN CANNING AND PICKING MADE FOR MAJOR CHANGES IN the cranberry industry. Large numbers of laborers were no longer needed, and the product was no longer seasonal. By the 1950s, most cranberries were processed into sauce or juice, and the Whitesbog operation was dying out. In the mid-’60s, the family



York. During slow times, many found their way to the fields. At Whitesbog, every season brought a pilgrimage of Italian families. While machines now did the sorting—with expansion proceeding apace—the picking was still by hand. The settlement grew so large that two additional villages were built to house seasonal workers. In 1911, more than 700 people lived at Whitesbog. Progressive Era reformers, concerned about child labor and other issues, soon focused on the cranberry industry. Since Whitesbog was the most prominent grower, it came under sharp scrutiny.

White’s daughter Elizabeth ardently defended the business against charges of labor exploitation. The saga went on for several years, eventually involving the National Child Labor Commission. In the end, authorities reached an agreement with growers and conditions improved. Whitesbog offered a better situation than most, eventually taking the lead in reform.

Elizabeth followed her father into agriculture, sharing his intrigue for experimentation. She began working with the wild blueberries that grew in the pine barrens. They proved more difficult than cranberries.

sold the property to the state, becoming part of the Brendan T. Byrne State Forest. Today, White’s descendants lease some of the bogs where they continue to grow cranberries.

The Whitesbog Preservation Trust was formed in 1982 to help maintain the site, now listed in the National Register of Historic Places. Many buildings, since restored, are open to the public. The Pinelands Institute for Natural and Environmental Studies is housed in the former general store.

In doing the documentation, GIS complemented large format photographs, significantly aiding in the production of site plans and measured drawings. The results—when compared with old photographs—show how Whitesbog changed over time. The GIS data could prove particularly useful in managing what is both a cultural site and nature preserve.

For more information, contact Bill Bolger, National Park Service Northeast Region, at bill_bolger@nps.gov or Lisa Davidson, Historic American Buildings Survey, at lisa_davidson@nps.gov. Visit the Whitesbog Preservation Trust online at www.whitesbog.org.

SPLendor IN THE GLASS

MODERNIST MASTERPIECE BECOMES NATIONAL HISTORIC LANDMARK

The Farnsworth House, Ludwig Mies van der Rohe's modernist masterpiece, has joined the ranks of the nation's most treasured places. Recently designated a national historic landmark, the glass and steel structure on a wooded lot in rural Illinois was not only unprecedented in its day, but continues to challenge conceptions of how domestic space relates to its natural setting.



WHILE ITS THOROUGHLY MODERN STYLE IS A STRIKING PRESENCE IN A RUSTIC SETTING, THE HOUSE ALSO HAS A TEMPORARY QUALITY. SUSPENDED OFF THE GROUND ON SHORT PIERS, IT GIVES THE IMPRESSION OF WEIGHTLESSNESS AND THE HINT OF A RELUCTANCE TO INTRUDE ON THE LAND.

CONCERN OVER THE ICON DROVE A FUNDRAISING CAMPAIGN THAT INVOLVED hundreds of contributors, including the nonprofit Friends of the Farnsworth House, an early advocate of preservation. In 2003, the house was put up for auction with Sotheby's International Real Estate, then purchased for \$7.5 million by the National Trust for Historic Preservation and Landmarks Illinois.

There were several concerns about the auction, one that the building's small size and relatively simple construction might encourage an owner to disassemble and move it elsewhere. Since the context is so much a part of the design, this would have been an irreparable loss. "There were real threats in terms of relocation, there's no doubt about it," says Landmarks Illinois president David Bahlman. It is one of only three Mies van der Rohe-designed houses in the United States.

The structure—located in Plano, Illinois, 55 miles outside Chicago—was conceived as a country getaway. Mies never entertained any traditional notions of what such a house might be, instead using it as an experiment for his ideas of space and structure. While it is spare and simple, the Farnsworth House possesses a certain grace as well, seen in the contrast of its delicate lines against stout trees and massed foliage. While its thoroughly modern style is a striking presence in a rustic setting, the house also has a temporary qual-

Left: Ludwig Mies van der Rohe and the interior of the Farnsworth House. Right: Light and airy amid rough nature.

ity. Suspended off the ground on short piers, it gives the impression of weightlessness and the hint of a reluctance to intrude on the land.

MIES FLED NAZI GERMANY IN THE 1930S ALONG WITH MANY OTHER ARCHITECTS of the Bauhaus School. In the United States, their work came to be known as the international style. Bauhaus architects had designed unadorned, functional apartment blocks with smooth facades, favoring asymmetry and repeated forms. In the United States, the style was enthusiastically embraced by the corporate culture, and found an expression in works such as New York City's Seagrams Building, designed by Mies in collaboration with Philip Johnson, and the sleek glass luxury apartments on Chicago's North Lake Shore Drive, designed by Mies himself.

The style lent itself mainly to large projects, and while the movement produced a few small buildings, none had the impact of the Farnsworth House. Dr. Edith Farnsworth, a Chicago kidney specialist, commissioned the project. Mies produced something that was revolutionary for its time—a 1,400 square-foot living space that has the appearance of a single room whose boundaries with the outside





fade to nearly nothing. Floor to ceiling windows enhance the effect, as do the slender steel beams and columns painted white to minimize their presence. Interior supports are concealed in the arrangement of a closet, bathroom, and fireplace enclosure, all encased in wood to harmonize with the setting.

The structure has been described as a meditation on the individual's relation to the space and time in which he lives. Mies was keenly aware of the human response to the techno-industrial society. People needed order and security as an antidote to its ills and alienating effects, he believed. At the same time, they craved the palliative effects of nature and open space. The design for the Farnsworth House was an attempt to achieve both. While the steel and glass are a nod to modern life, the transparency and openness bring the natural setting flooding in. The outdoors is an imposing

presence inside the house, the boundary between the two all but erased, but the ordered world is very much present in the familiar shapes and textures. Historian Franz Schulze said about the Farnsworth House, "Certainly [it] is more nearly temple than dwelling, and it rewards aesthetic contemplation before it fulfills domestic necessity."

The Fox River runs along the property and while the architect could have chosen to build on higher ground, he did not, immersing the structure in its wooded setting. The siting itself was a challenge to nature. The outdoor terraces step down, repeating the contour of the land, the harmony enhanced by the rectilinear form parallel to the river. Even before the house was built it was getting notice; a model was displayed at New York's Museum of Modern Art in 1947.

IN THE POST-WAR YEARS, THE PRICE OF CONSTRUCTION MATERIALS WAS steadily rising, and there were cost overruns, causing a rift between Mies and Farnsworth. When the house was completed in 1951 it cost \$72,000. The two sued each other, the courts siding with the architect. Farnsworth was active in her criticism of Mies, complaining to architecture critics of the day. Frank Lloyd Wright, an opponent of the international style, weighed in with a denunciation of the house and the style in general. The sparsity and uniformity, according to Wright, was out of touch with human needs, and the cold, anony-

20th century architecture.” The house was considered such a seminal work that architecture students regularly made the pilgrimage to view it, prompting Palumbo to put a fence around the property.

The Friends of the Farnsworth House had lobbied the state to purchase the house and though several million dollars were appropriated for that purpose, the deal never went through. Now under ownership of the Trust, it is operated as a museum by Landmarks Illinois. The 25th historic building purchased by the Trust, today the house is open to the public, its resource center a repository of

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mous touch and lock-step repetition of shape smacked of communism. This critique still exists today. It is a testament to the house’s impact that it still serves as a lightning rod for argument.

Though the house was situated slightly above the 100-year flood level, high water reached it twice, in 1956 and 1996, causing major damage. Farnsworth sold the house in 1972 to British art collector and architecture aficionado Lord Peter Palumbo, who had the place restored to its original 1951 appearance. He hired Mies’ grandson, also an architect, to oversee the work. Sotheby’s described the Farnsworth House as “one of the seven wonders of the modern architectural world . . . a staggering development in

information about the groundbreaking creation with books, periodicals, photographs of the construction and original furnishings, and an interactive tutorial on Mies van der Rohe’s career. There are also oral histories—available on DVD—from people who were involved with the project.

LANDMARKS ILLINOIS IS CURRENTLY RAISING FUNDS FOR AN ENDOWMENT to support the operation of the Farnsworth House. According to Bahlman, about \$700,000 has been raised so far with an ultimate goal of \$5 million.

Also in the works is a preservation easement that will prevent any alteration to the house or property without the approval of the Trust and Landmarks Illinois. The easement—in effect in perpetuity—will provide what Bahlman calls “an extra layer of protection” for the modernist masterpiece.

For more information, contact Landmarks Illinois, email mail@farnsworthhouse.org. Also visit the website of the Farnsworth House at www.farnsworthhouse.org.

Near left: Owner Edith Farnsworth with her house in winter. Far left: Splendor in its setting.

LEFT, BELOW LEFT TIGERHILL STUDIO, BELOW RIGHT NORTHWESTERN MEMORIAL HOSPITAL

